FCC RF EXPOSURE REPORT

FCC ID: V7TA9V2

Project No.	**: 1901C127**
Equipment	**: Wireless N300 Universal Range Extender**
Model Name	**: A9**
Series Model	**: N/A**
Applicant	**: SHENZHEN TENDA TECHNOLOGY CO.,LTD**
Address	**: 6-8 Floor, Tower E3, No. 1001, Zhongshanyuan Road, Nanshan District, Shenzhen, China. 518052**
According:	**: FCC Guidelines for Human Exposure IEEE C95.1 & FCC Part 2.1091**

BTL INC.

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Certificate #5123.02

1. GENERAL SUMMARY

Equipment	:	Wireless N300 Universal Range Extender
Brand Name	:	Tenda
Test Model	:	A9
Series Model	:	N/A
Applicant	:	SHENZHEN TENDA TECHNOLOGY CO.,LTD
Manufacturer	:	SHENZHEN TENDA TECHNOLOGY CO.,LTD
Address	:	6-8 Floor, Tower E3, No. 1001, Zhongshanyuan Road, Nanshan District, Shenzhen, China. 518052
Date of Test	:	Feb. 25, 2019 ~ Mar. 15, 2019
Test Sample	:	Engineering Sample No.: D190201575
Standards	:	FCC Title 47 Part 2.1091, OET Bulletin 65 Supplement C

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc.
The test data, data evaluation, and equipment configuration contained in our test report (Ref No. BTL-FCCP-2-1901C127) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of A2LA according to the ISO/IEC 17025 quality assessment standard and technical standard(s).

2. MPE CALCULATION METHOD

Calculation Method of RF Safety Distance:

$$S = \frac{PG}{4\pi r^2} = \frac{EIRP}{4\pi r^2}$$

where:
S = power density
P = power input to the antenna
G = power gain of the antenna in the direction of interest relative to an isotropic radiator
R = distance to the center of radiation of the antenna

Antenna Specification:

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	N/A	N/A	Dipole	N/A	2.7
2	N/A	N/A	Dipole	N/A	2.7

Note:

(1) Antenna Gain=2.7dBi. This EUT supports MIMO 2X2, any transmit signals are correlated with each other, so Directional gain = G_{ANT}+10log(N)dBi, that is Directional gain=2.7+ 10log(2)dBi=5.71.

(2) Beamforming Gain: 3dB, so Directional gain=2.7+3=5.7.

The worst case for 1TX / 2TX as follow:

Operating Mode / TX Mode	1TX	2TX
IEEE 802.11b	V (ANT 2)	-
IEEE 802.11g	V (ANT 2)	-
IEEE 802.11n (HT20)	-	V (ANT 1 + ANT 2)
IEEE 802.11n (HT40)	-	V (ANT 1 + ANT 2)

3. TEST RESULTS

For 2.4GHz Non-Beamforming:

Directional Gain (dBi)	Directional Gain (numeric)	Max. Output Power (dBm)	Max. Output Power (mW)	Power Density (S) (mW/cm^2)	Limit of Power Density (S) (mW/cm^2)	Test Result
5.71	3.7239	29.17	826.0379	0.61228	1	Complies

For 2.4GHz With Beamforming:

Directional Gain (dBi)	Directional Gain (numeric)	Max. Output Power (dBm)	Max. Output Power (mW)	Power Density (S) (mW/cm^2)	Limit of Power Density (S) (mW/cm^2)	Test Result
5.70	3.7154	28.95	785.2356	0.58070	1	Complies

Note: The calculated distance is 20 cm.

End of Test Report